

Device for displaying a range of objects.

The present invention relates to devices for displaying  
5 a range of objects.

In particular, the invention relates to a device for displaying a range of objects, comprising:

- a display stand comprising a board provided with a front face designed to be provided with a range of objects for display and, opposite the front face, a rear face having a bottom extremity,
- at least one support leg hinged by connection means to the rear face of the display stand, and
- 15 - locking means for locking the support leg relative to the display stand in a first inclined position, the device being designed to stand in a stable manner, in the first inclined position, simply by the support leg and the bottom extremity of said display stand resting simultaneously on a support surface.

On a stall, such devices are often used to set out a range of objects for display, consisting for example of several identical or similar examples of a given type 25 of object. Often, these devices comprise a display stand mounted on a support leg that is hinged to allow it to be laid flat against the back of the display stand or opened out into a suitable position to form a tripod with the lower part of the display stand in such 30 a way that the stand is positioned close to the vertical. For this purpose the support leg is often relatively long, to give better stability in positions close to the vertical, and extends some way out to the rear, taking up a lot of space, especially in stalls 35 with not much depth.

These known devices offer little freedom of action because the user can generally only use them in positions close to the vertical, and cannot easily

adapt them to a stall where the dimensions are unsuited to such a device. There is therefore a need for a display device easily adaptable to all circumstances.

- 5 It is a particular object of the present invention to alleviate these problems.

To this end, the invention provides a device designed for displaying a range of objects, which in addition to the attributes mentioned above is essentially characterized in that the locking means are designed to lock the support leg relative to the display stand in at least one second inclined position different from the first inclined position,

- 15 the device being designed to stand in a stable manner, in the second inclined position, simply by the support leg and the bottom extremity of said display stand resting simultaneously on a support surface, and in that said support leg is arranged so as to be located entirely underneath the display stand between the first and second inclined positions.

By means of these arrangements, great freedom of use is obtained, because the user has great freedom of action with a footprint that has been minimized by the fact that, whatever the angle of the display stand, the support leg lies entirely between vertical lines dropped from the top and bottom edges of the display stand.

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In various preferred embodiments of the invention, use may also optionally be made of any of the following arrangements:

- 35 - in the first inclined position, the support leg and said rear face of the display stand are set at an angle  $\alpha$  variable from  $0^\circ$  to  $180^\circ$ ;
- the angle  $\alpha$  varies from  $30^\circ$  to  $120^\circ$ ;

- the support leg is retractable into the rear face of the display stand;
- 5    - the support leg comprises an essentially planar panel whose width is not greater than the width of the display stand;
- 10   - the locking means comprise a part of the rear face of the display stand and a part of the support leg acting on each other by friction;
- 15   - the support leg and the display stand are hinged by a pivot connected to the support leg and by a part of the rear face of the display stand with respect to which the pivot is designed to be able to rotate, the pivot being built into the thickness of the board;
- 20   - the pivot comprises a plurality of housings, and the locking means comprise:
  - at least one pin connected in rotation to the support leg and designed to slide with respect to the pivot between an immobilized position and a mobilized position, and
  - at least one tooth connected to the pin and designed to engage selectively with a housing in the immobilized position and to be removed from said housing in the mobilized position;
- 25   - the board has reliefs, the device comprising at least one sample holder having reliefs that fit the reliefs of the board by engagement;
- 30   - the display stand comprises a board and at least one sample holder attached removably to the board by magnetic means;
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- at least one sample holder is of right-angled parallelepiped shape, of width a and length b, b being an integer multiple of a, and the board has a rectangular front face of width W and length H, W being an integer multiple of b and H being an integer multiple of a;
  - at least one sample holder has a length b approximately equal to twice the width a; and
  - the support leg is hinged to the rear face of the display stand at a point in the center of said rear face, and
- 15     • the upper part of the display stand, extending from said central point to said top extremity,
- the lower part of the display stand, extending from said central point to said bottom extremity, and
- 20     • the support leg

have approximately equal lengths.

25 Other features and advantages of the invention will become clear in the course of the following description of two of its embodiments, the description being given by way of non-restrictive example, with reference to the attached drawings.

30 In the drawings:

- figure 1 is a three-quarter perspective front view of a first embodiment of the invention;
- figure 2 is a three-quarter perspective rear view of a second embodiment of the invention;

- figures 3a and 3b are side views showing the first embodiment, each at a different angle;
- 5        - figure 4 is a partial section through a hinge mechanism; and
- 10      - figure 5 is a diagrammatic view representing one embodiment of an immobilizing mechanism used in the context of the invention.

In the various figures, identical references denote identical or similar elements.

Figure 1 shows a device 1 according to the invention.  
15 It comprises a display stand 2, in the form of for example a board 14 made of plastic, metal or other material. The board 14 comprises an essentially planar display face 3 extending over a width W and over a display height H, designed to be provided with objects  
20 for display. On the other side to the display face 3, the board 14 has a rear face 4 (figure 2) comprising an upper region 5 and a lower region 6, their dimensions being cumulatively approximately equal to the display height H.

25 In the first embodiment, figure 1, the board has, in the upper region of the rear face, a generally constant thickness equal to  $w_5$ . In the lower region of the rear face, the board has a generally constant thickness  $w_6$  greater than  $w_5$ .

35 The display face 3 is designed to hold articles for display which may be directly placed on the display face 3. In the example considered, the articles are placed on a sample holder 10. The articles may be, for example, samples whose size is such that several units can be arranged on the sample holder. These samples may for example represent characteristics of more voluminous articles held in stock. In this way, for

example, several color spots representing different types of lipstick can be arranged on each sample holder.

- 5 The samples may for example be circles of color stuck to the sample holder 10. Alternatively, the sample holder 10 may have cells 9 arranged in rows and columns and designed to hold the samples.
- 10 The sample holder 10 may for example be of a right-angled parallelepiped shape with a front face of length b, of width a which may be arranged either with its length aligned with the width of the board 14 as shown in figure 1, or with its length aligned with the length 15 of the board 14, for example.

The sample holder 10 in question may be fixed rigidly to the display face 3 of the board 14 in the course of manufacture, or, for example, arranged removably in a 20 modular manner on said board. For this purpose, it is possible for example for the sample holder 10 to be fixed in various known ways such as:

- by inserting studs (not shown) on the lower face of 25 the sample holder into corresponding orifices 11 in the board 14,
- by means of magnets built into the sample holder and/or board 14, these magnets acting on 30 corresponding magnets or ferromagnetic elements built into the board 14 and/or the sample holder 10, respectively,
- by a combination of these two methods, or other 35 methods.

The device also has a support leg 12 of length L, of width less than or approximately equal to the width of the display portion, and of thickness  $w_{12}$  less than  $w_6$ .

The support leg is connected to the rear face of the display portion by a connecting mechanism 13. In one particular embodiment, the connecting mechanism is situated at a point in the center of the rear face 4 of the display stand, and the length of the support leg 12 is equal to one half of the height of the display stand.

10 The device can be arranged in a stable manner on a support surface in a first inclined position, in which the support leg and the display stand form an angle  $\alpha$ , with the support leg and the bottom extremity of the display stand resting on the support surface.

15 The angle  $\alpha$  can at least extend between  $30^\circ$  and  $120^\circ$ , thus allowing numerous configurations of the device within a very small footprint. In the example considered, the angle  $\alpha$  can extend from  $0^\circ$  to  $180^\circ$ . Between two these angular values, the support leg 12 can also be inclined and locked relative to the display stand in a second inclined position different from the first inclined position.

25 To this end, a hinge mechanism is presented in figure 4. Other types of hinges allowing the same movement could nevertheless be used within the context of the invention.

30 A pivot 17 is connected to the leg 12 and possesses a cylindrical recess 17a in which a lateral extremity 30 of a central part 16 of the rear face 4 of the display stand, of complementary shape, can revolve under the action of a user. When the user is not applying any force to the display stand or to the support leg 12, 35 the parts are locked relative to each other by simple friction between the parts.

A variant of the locking means uses a locking mechanism as shown in figure 5 in an intermediate position

between an immobilized position and a mobilized position.

- The pivot 17 connected to the leg 12 has a cylindrical through recess 17a extending along the axis of rotation and an inner face 17b normal to the axis of rotation. It also possesses hollow housings 26 let into its outer face.
- 10 The central part 16 of the rear face 4 of the display stand also has a cylindrical through recess 24 aligned with that of the pivot. It is also provided with a chamber 23 of non-cylindrical, e.g. square, section.
- 15 The mechanism also includes a cylindrical pushbutton 21 with teeth 28 arranged at regular angular intervals on the inner face 21a of the pushbutton 21, complementary in shape to the housings 26 on the outer face of the pivot 17, and housed in these housings when the mechanism is in the immobilized position.

The pushbutton 21 is mounted on a rod 15 designed to slide in the cylindrical recess 17a, 24. The rod is also integral with a collar 22. The rod carries a compression spring 20, a first end of which is in contact with the collar 22 and a second end in contact with the inner face 17b of the pivot. The rod has an enlarged end 19 whose cross section is complementary to that of the chamber 23 of the part 16, which enlarged end slides inside the chamber 23 parallel to the rod 15.

With these arrangements, only a translational movement of the rod 15 is permitted relative to the display stand. To mobilize the mechanism, the pushbutton 21 is moved toward the left in figure 5 by an operator against the pressure of the spring 20, and the teeth 28 come out of the corresponding housings 26 of the pivot. The pivot 17 and the leg can then revolve freely

relative to the display stand, for example when adjusted by a user. Once the desired angle is reached, the hinge can be immobilized again by releasing the pushbutton 21 which is returned by the spring 20 to the  
5 immobilized position.

For any position of the hinge mechanism lying strictly between  $0^\circ$  and  $180^\circ$ , such as for example the position shown in figure 3a, the bottom extremity of the support  
10 leg 12 and the bottom extremity 6a of the lower region support the display stand carrying the samples on the display face and possibly the sample holder 10.

The device 1 can also be laid completely flat in a  
15 first prone position. All that is required for this is that a contact surface 12a of the support leg 12 be brought into contact with the upper region 5 of the rear face, which forms a contact surface of complementary shape, these two contact surfaces being  
20 for example planar. It may be envisaged in particular that the sum of the respective thicknesses  $w_5$  and  $w_{12}$  of the upper region 5 and of the support leg 12 is approximately equal to the thickness  $w_6$  of the lower region 6 so that the device can be laid flat on the  
25 lower region 6 of the device and on a support surface 12b of the support leg, on the opposite side from the contact surface 12a, as shown in figure 3b. The support leg 12 and the pivot 17 now lie within the thickness of the display stand.  
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In a second embodiment, shown in figure 2, the upper region possesses a thickness equal to the sum of the thicknesses of the lower region and of the support leg, and the connecting mechanism is designed so that the  
35 support surface 12b of the support leg comes into contact with the lower region 6 of the display stand, the contact surface 12a and the upper region 5 now resting on the support in a second prone position. The

support leg 12 and the pivot 17 now lie within the thickness of the display stand.

In yet another variant, the support leg may be narrower  
5 than the display stand. The thickness of the profile of  
the display stand is then constant from top to bottom  
and the upper region and/or lower region of the rear  
face has a recess whose width is at least equal to the  
width of the leg, and complementary in shape to that  
10 surface of the leg which is designed to come into  
contact with it, so that the support leg can be  
entirely retracted in either or both of the prone  
positions.